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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/739,236	12/19/2000	Yutaka Takeishi	00USFP557-M.O.	4462
466	7590	11/17/2003	EXAMINER	
AKKAPEDDI, PRASAD R				
ART UNIT			PAPER NUMBER	
2871				

DATE MAILED: 11/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

11c

Office Action Summary	Application No.	Applicant(s)	
	09/739,236	TAKEISHI, YUTAKA	
	Examiner	Art Unit	
	Prasad R Akkapeddi	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 1-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Claim Objections

2. Claim 29 is objected to because of the following informalities:

The recited limitation in the instant dependent claim "the attachment member comprises a flexible printed board" conflicts with the statement in claim 28 (claim 29 depends on claim 28), i.e., in claim 28 it is recited that "the attachment member fixedly attached only to said circuit board". Hence in claim 28, it appears that the attachment member and the circuit board are two different

elements. Whereas, in claim 29, it appears that they are a part of one element.

Clarification is required.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 16-27 (amended and original) and 28-35 (new) are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyajima et al. (Miyajima) (U.S. Patent No. 4,652,932) in view of the applicant cited reference, Doi Akihiko (Doi) (JP-403116898A) (previously cited).

a. As to claims 16, 23: Miyajima discloses a liquid crystal display apparatus comprising a liquid crystal display screen (66) a board (104) used for the liquid crystal display screen, a variable electronic element (118) mounted in a mounting side of the board, the variable electronic element having an operating member (screw) to control an output (variable) to display an image. Miyajima does not explicitly go into any great details of mounting of the variable electronic element. Doi on the other hand, in disclosing an electronic equipment discloses a board (13), a variable electronic element (volume resistor) and operating member (screw) (16), a through hole (17) at a position opposed to the volume resistor.

The operating member (screw) points in the other side opposite to the mounting side of board and operation through the hole (Fig. 1).

As to the newly recited limitation in claims 16 and 23: Miyajima discloses a lower shield plate (94) that is transparent and fixedly attached to a panel support plate (96) which serves as a reinforcing member for the flexible circuit board (92) (col. 6, lines 12-17) (Fig. 3). Hence the flexible circuit board is fixedly attached to the liquid crystal display (66) via the lower shield plate (94) and the panel support plate (96).

As to the recited limitation in claim 16 "operating said member through said hole from said other side while viewing said image", it has been recognized that "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production or operation. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the mounting configuration as disclosed by Doi to the display device of Miyajima such that the device can be well handled (abstract).

As to claims 17-22, 24-27 (original): Doi discloses in Fig. 1 that the operating member (16) does not project from other side, since it is accessible through a printed circuit board (13) and the mounting configuration of the variable electronic element (16) through the printed circuit board; the covering of the hole by the printed circuit board (Fig. 1); the floating of the variable electronic element can also be seen in Fig. 1. Doi discloses the operation of the variable electronic element with a screw driver (20) through the hole (17) and as such the printed circuit board protects the element from mechanical stress and when such a board is mounted in the display of Miyajima, it would have been obvious to one having ordinary skill in the state of the art that such action will not apply any mechanical stress to the liquid crystal display screen, because the panel (66) has a lower shield plate (94) which is also supported by a support plate (96) and overlaps the display screen. Doi discloses that the variable electronic element is mounted through an attachment member (19) electronically and mechanically connected to the side which covers the hole; the recessed portion is shown with dashed lines.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the mounting configuration as disclosed by Doi to the display device of Miyajima such that the device can be handled rather easily.

As to claims 28-35 (new): Miyajima discloses a liquid crystal display screen (66), a signal processing circuit board (92), an attachment member (94

and 96) fixedly attached to the circuit board (col. 6, lines 12-23), a variable electronic element (118), the electrical contacts (80a, 80b) (conductive bumps).

As described above Doi fills in some of the limitations that are missing from Miyajima's teachings such as the accessibility of the hole from the other side of the circuit board, the recessing nature of the variable resistor can clearly be seen in the teachings of Doi (Fig. 1), the operating member (16) (screw) being substantially flush can also be seen from Fig. 1. Miyajima's teachings include variable resistors (118), capacitors (116).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the mounting configuration as disclosed by Doi to the display device of Miyajima such that the device can be handled rather easily.

Response to Arguments

5. Applicant's arguments with respect to claims 16-27 have been considered but are moot in view of the new ground(s) of rejection.

6. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5

USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the teachings of Miyajima and Doi can be combined because they both apply to electronic equipment comprising of circuit boards, resistors, capacitors etc., and the mounting techniques, such as floating, mounting and accessing an element through a hole are quite common for these types of devices.

7. In response to applicant's argument that Doi's teaching is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the teachings of Miyajima and Doi are analogous because they both apply to electronic equipment comprising of circuit boards, resistors, capacitors etc., and the mounting techniques, such as floating, mounting and accessing an element through a hole are quite common for these types of devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prasad R Akkapeddi whose telephone number is 703-305-4767. The examiner can normally be reached on 7:00AM to 5:30PM M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H Kim can be reached on 703-305-3492. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

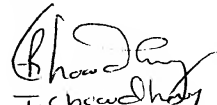
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Art Unit: 2871

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0530.

Prasad R Akkapeddi, Ph.D
Examiner
Art Unit 2871


T. Choudhary
Primary Examiner